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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/001,495

10/31/2001

Zili Li

CM01365I(69613)

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02/28/2004

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CHICAGO, IL 60603-3406

EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/001,495	LI ET AL.	
	Examiner	Art Unit	
	Prasad R Akkapeddi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 9-15 and 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4142003, 7162003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Initially, in response (dated 12/2/2003) to an election of species requirement per office action dated 10/01/2003, the applicant has chosen NOT to elect a single species. However, the applicant has amended the claims such that only a single independent claims (claim 16) is presented for consideration.

However, During a telephone conversation with Mr. Steven G. Parmelee on 01/29/2004 a provisional election was made without traverse to prosecute the invention of species I, claims 16 and 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-15 and 17-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

2. Claim 1 is objected to because of the following informalities: Claim 1 depends on claim 16. The recited limitation in claim 16 reads " a display having a substantially transparent backside" making the display a transmissive device. However, claim 1 recites " a reflective liquid crystal display". Two claims seem to contradict each other. It is suggested that the word 'substantially' in claim 16 be changed to 'partially'.

Appropriate correction is required.

3. Claim 8 is objected to because of the following informalities: One part of the claim recites ' a light-receiving inactive surface has a different color than the substantially dark-colored light-receiving active surface', whereas another part of the

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same claim recites 'mask surfaces that substantially conform to at least some of the light-receiving inactive surface and that has a color that substantially matches the substantially dark-colored light-receiving active surface. The two statements seem to contradicting each other because the light-receiving inactive surface has both a different color in one instance and in the other has a color that substantially matches the dark-colored light-receiving active surface. The Examiner is sufficiently confused regarding the color of the light-receiving inactive surface and the examination of the rest of the application is based upon the assumption that they both have substantially same color. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 7 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Doane et al. (Doane) (U.S.Patent No. 6,518,944).

As to claim 16: Doane discloses a combined cholesteric liquid crystal display and solar cell assembly device with transparent back substrate (24) (Fig.

2) which is made from glass (col. 8, lines 30-37), a solar cell (300) having a light absorbing (hence, uniform dark-colored light receiving surface) solar panel assembly (310) disposed proximal to the backside of the display (Fig. 2) such that some light passing through the display will illuminate the light-receiving active surface (col. 10, lines 13-20).

As to claim 1: Doane's device is a reflective flat-panel display (col. 1, lines 7-8) having a backside (24) and a front side (22) with a cholesteric liquid crystal material (40) (col. 8, line 35) and discloses that at least some light passing from the front side (22) and through the backside (24) will illuminate the light-receiving active surface of the solar panel (Fig. 2).

As to claims 2-3: Doane discloses that the device has no polarizer (col. 18, lines 53-54) and the solar panel is light absorbing, hence the surface is substantially black-colored.

As to claim 7: Doane discloses plurality of solar cells (col. 11, lines 13-14).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doane in view of Schmidt (U.S. Patent No. 6,452,088).

As to claims 4-6: Doane does not disclose a wireless communications device.

Schmidt in disclosing a power-generating active matrix display device, discloses a wireless communication device (101) and its connection to the liquid crystal display through the computer system (200) (Fig. 3). Schmidt also discloses the operability of the wireless communications device with the liquid crystal display device and the charging and extending the life of the battery (col. 6, lines 24-67 and cols. 7 and 8).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the wireless communication device as disclosed by Schmidt to the liquid crystal display of Doane to expand the functionality and capabilities of a computer system that effectively combines multiple components required to generate power and display images into a single integrated circuit device thus reducing manufacturing costs and provides for fast, easy migration of existing designs to high performance, high efficiency single chip solutions (col. 2, lines 31-40).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doan in view of Kamei et al. (Kamei) (U.S. Patent No. 5,841,738).

As to claim 8: Doane does not disclose a light receiving inactive area or a mask surfaces that conform to at least some of the light-receiving inactive surface nor does he disclose the color of the light-receiving inactive surface.

Kamei in disclosing display structure for electronic device discloses an insulating band (mask) is interposed between solar cells (col. 1, lines 22-26). This insulating band as can be seen from Fig. 9, separates the light receiving inactive surfaces (behind the insulating band) from the light receiving active surfaces (2), i.e., the surfaces behind the band are blocked from receiving any light from the front and hence become light receiving surfaces are inactive, whereas the surfaces (2) are solar cells that receive light. Since the light receiving active surfaces (solar panels) are light absorbing and made of amorphous silicon layer, as disclosed by Kamei, hence they are dark and the insulating bands obstruct the light from reaching the light receiving inactive layer, they both have substantially the same color. As for having different color, Kamei also discloses a hologram layer for transmitting light of different color to the light receiving active surfaces.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the color and mask configuration as disclosed by Kamei in the description of background art, to the device of Doane to improve the degree of freedom in designing the appearance and to improve the light utilization factor (col. 2, lines 17-19).

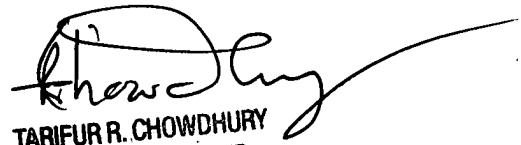
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PR

Prasad R Akkapeddi, Ph.D
Examiner
Art Unit 2871


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER